

WHAT IS CLAIMED IS:

1. A broadcast type service system using communications according to Bluetooth specification, the system
5 comprising:
 - at least one transmission device;
 - a reception information providing device; and
 - a plurality of reception devices;
 - each transmission device having:
 - 10 a transmission device communication unit configured to carry out communications with the reception information providing device and the reception devices; and
 - a transmission device control unit configured to control the transmission device communication unit to
 - 15 transmit application data to at least one reception device and to transmit a reception establishing information of each transmission device which is necessary for a reception device to receive the application data transmitted from each transmission device;
 - 20 the reception information providing device having:
 - a reception information providing device communication unit configured to carry out communications with each transmission device and the reception devices; and
 - 25 a reception information providing device control unit configured to control the reception information providing device communication unit to receive the reception establishing information of each transmission device transmitted from each transmission device, and to
 - 30 transmit the reception establishing information of a specified transmission device to a prescribed reception device; and
 - each reception device having:
 - 35 a reception device communication unit configured to carry out communications with each transmission device and

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- the reception information providing device; and
a reception device control unit configured to
control the reception device communication unit to receive
the reception establishing information of one transmission
5 device transmitted from the reception information providing
device, and to receive the application data transmitted
from said one transmission device according to the
reception establishing information of said one transmission
device.
- 10 2. The system of claim 1, wherein the reception
information providing device also has a memory unit
configured to store the reception establishing information
received by the reception device communication unit.
- 15 3. The system of claim 1, wherein the reception
information providing device also has a plurality of memory
units configured to separately store the reception
establishing information of a plurality of transmission
20 devices received by the reception device communication
unit.
4. The system of claim 1, wherein the reception
information providing device control unit is also
25 configured to acquire a service specification of a service
provided by each transmission device from each transmission
device, compare the service specification of the specified
transmission device with a specification of service
acceptable to the prescribed reception device, and control
30 the reception information providing device communication
unit to transmit the reception establishing information of
the specified transmission device to the prescribed
reception device only when the service specification of the
specified transmission device is acceptable to the
35 prescribed reception device.

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5. The system of claim 1, wherein the transmission device control unit of each transmission device is also configured to control the transmission device communication unit to
5 transmit the application data even when there is no reception device that is carrying out communications with each transmission device in an active mode according to the Bluetooth specification.
- 10 6. The system of claim 1, wherein the reception device control unit is also configured to control the reception device communication unit to receive the application data transmitted from said one transmission device according to the reception establishing information of said one
15 transmission device, only when communications in an active mode according to the Bluetooth specification cannot be carried out with said one transmission device.
7. The system of claim 1, wherein the reception device
20 communication unit receives the reception establishing information that indicates a hopping pattern and a phase of said one transmission device.
8. The system of claim 1, wherein the reception device
25 communication unit receives the reception establishing information that indicates a Bluetooth device address and a clock of said one transmission device.
9. The system of claim 1, wherein the reception
30 information providing device communication unit transmits the reception establishing information of the specified transmission device that indicates a Bluetooth device address of the specified transmission device, a clock offset between the specified transmission device and the
35 reception information providing device, and a clock of the

reception information providing device at a time of transmitting the reception establishing information to the prescribed reception device.

- 5 10. The system of claim 1, wherein the reception information providing device communication unit transmits the reception establishing information of the specified transmission device that indicates a Bluetooth device address of the specified transmission device, a clock of
- 10 the specified transmission device at a time of transmitting the reception establishing information from the specified transmission device to the reception information providing device, a clock of the reception information providing device at a time of receiving the reception establishing
- 15 information from the specified transmission device, and a clock of the reception information providing device at a time of transmitting the reception establishing information to the prescribed reception device.
- 20 11. The system of claim 1, wherein the reception information providing device communication unit receives the reception establishing information of each transmission device by carrying out communications according to the Bluetooth specification with each transmission device.
- 25 12. The system of claim 1, wherein the reception information providing device communication unit receives the reception establishing information of each transmission device by carrying out communications different from
- 30 communications according to the Bluetooth specification with each transmission device.
- 35 13. A broadcast type service system using communications according to Bluetooth specification, the system comprising:

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at least one transmission device; and
a plurality of reception devices;
each transmission device having:
a transmission device communication unit configured
5 to carry out communications with the reception devices; and
a transmission device control unit configured to
control the transmission device communication unit to
transmit application data to at least one reception device,
and to transmit a reception establishing information of
10 each transmission device which is necessary for a reception
device to receive the application data transmitted from
each transmission device; and
each reception device having:
a reception device communication unit configured to
15 carry out communications with each transmission device; and
a reception device control unit configured to
control the reception device communication unit to receive
the reception establishing information of one transmission
device transmitted from said one transmission device by
20 carrying out communications in an active mode according to
the Bluetooth specification with said one transmission
device, and to receive the application data transmitted
from said one transmission device according to the
reception establishing information of said one transmission
25 device when communications with said one transmission
device is switched from the active mode to a park mode
according to the Bluetooth specification.

14. The system of claim 13, wherein the transmission
30 device control unit of each transmission device is also
configured to send an inquiry to one reception device that
is carrying out communications in the active mode with each
transmission device, the inquiry inquiring whether said one
reception device is a device capable of switching to
35 communications in the park mode or not, receive a response

to the inquiry from said one reception device, store information on the response, and switch communications with said one reception device from the active mode to the park mode according to stored information on the response.

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15. The system of claim 13, wherein the transmission device control unit of each transmission device is also configured to control the transmission device communication unit to transmit the application data even when there is no
10 reception device that is carrying out communications with each transmission device in an active mode according to the Bluetooth specification.

15. The system of claim 13, wherein the reception device control unit is also configured to control the reception device communication unit to receive the application data transmitted from said one transmission device according to the reception establishing information of said one
20 transmission device, only when communications in an active mode according to the Bluetooth specification cannot be carried out with said one transmission device.

17. The system of claim 13, wherein the reception device communication unit receives the reception establishing information that indicates a hopping pattern and a phase of
25 said one transmission device.

18. The system of claim 13, wherein the reception device communication unit receives the reception establishing information that indicates a Bluetooth device address and a
30 clock of said one transmission device.

19. A method for providing a broadcast type service using communications according to Bluetooth specification, the
35 method comprising:

- (a) transmitting application data from each transmission device to at least one reception device;
- (b) transmitting from each transmission device a reception establishing information of each transmission device which is necessary for a reception device to receive the application data transmitted from each transmission device;
- (c) receiving the reception establishing information of each transmission device transmitted from each transmission device at a reception information providing device;
- 10 (d) transmitting the reception establishing information of a specified transmission device from the reception information providing device to a prescribed reception device;
- (e) receiving the reception establishing information of one transmission device transmitted from the reception information providing device at one reception device; and
- 15 (f) receiving the application data transmitted from said one transmission device at said one reception device according to the reception establishing information of said one transmission device.

20. A method for providing a broadcast type service using communications according to Bluetooth specification, the method comprising:
- 25 (a) transmitting application data from each transmission device to at least one reception device;
 - (b) transmitting from each transmission device a reception establishing information of each transmission device which is necessary for a reception device to receive the application data transmitted from each transmission device;
 - 30 (c) receiving the reception establishing information of one transmission device transmitted from said one transmission device at one reception device by carrying out communications in an active mode according to the Bluetooth specification with said one transmission device; and

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(d) receiving the application data transmitted from said one transmission device at said one reception device according to the reception establishing information of said one transmission device when communications with said one 5 transmission device is switched from the active mode to a park mode according to the Bluetooth specification.

21. A reception information providing device in a broadcast type service system using communications 10 according to Bluetooth specification, the reception information providing device comprising:

a communication unit configured to carry out communications with each transmission device and reception devices; and

15 a control unit configured to control the communication unit to receive a reception establishing information of each transmission device transmitted from each transmission device which is necessary for a reception device to receive application data transmitted from each transmission device, 20 and to transmit the reception establishing information of a specified transmission device to a prescribed reception device, such that the prescribed reception device can receive application data transmitted from the specified transmission device according to the reception establishing 25 information of the specified transmission device received from the reception information providing device.

22. A reception device in a broadcast type service system using communications according to Bluetooth specification, 30 the reception device comprising:

a communication unit configured to carry out communications with each transmission device; and

35 a control unit configured to control the communication unit to receive a reception establishing information of one transmission device transmitted from said one transmission

device which is necessary for the reception device to receive application data transmitted from said one transmission device, by carrying out communications in an active mode according to the Bluetooth specification with 5 said one transmission device, and to receive application data transmitted from said one transmission device according to the reception establishing information of said one transmission device when communications with said one transmission device is switched from the active mode to a 10 park mode according to the Bluetooth specification.

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